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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,917	07/20/2000	Toshio Nomura	49982(551)	3874
21874	7590	09/21/2007		
EDWARDS ANGELL PALMER & DODGE LLP			EXAMINER	
P.O. BOX 55874			TRAN, NHAN T	
BOSTON, MA 02205			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/619,917	Applicant(s) NOMURA ET AL.	
	Examiner Nhan T. Tran	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/10/2007 & 6/28/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on 8/10/2007 & 6/28/2007 have been entered.

Response to Arguments

2. Applicant's arguments, filed 6/28/2007, with respect to claim 1-3, 6-11 have been considered but are moot in view of the new ground of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parulski et al. (US 5,914,748) in view of Smith et al. (US 6,301,382).

Regarding claim 11, Parulski discloses an image pickup apparatus (Figs. 3A – 5) taking a first image (image 12) including an object (12') and a second image (image 18) including only a background but not the object (see Fig. 1; col. 2, lines 30-49), and having a shutter button (19) for releasing a shutter (see Fig. 4A; col. 4, lines 40-44), comprising:

- a time measuring portion (inside the camera) measuring a time (i.e., 10 seconds) after said shutter button is manually pressed (see col. 4, lines 51-58);

- an output selecting portion (image sensor and control circuit of the camera) outputting only a single image (only the first image 12) taken when a first predetermined period of time (i.e., 10 seconds) is measured by said time measuring portion as said first image, and outputting an image (the second image 18) taken when a second predetermined period of time (i.e., another 10 seconds) is further measured by said time measuring portion after the first period of time as said second image (see col. 4, lines 51-58), wherein, only said single image (only the first image 12) is taken before said second predetermined time is measured, and said shutter button is located on a body of said image pickup apparatus (see Figs. 1 & 4A; col. 4, lines 40-44 and lines 51-58).

As disclosed by Parulski above, the first image includes the background and the object, and the second image includes only the background. Parulski fails to teach that the first image includes only a background but not the object, and the second image includes the background and the object.

However, Parulski suggests that variations and modifications can be effected by a person of ordinary skill in the art without departing from the scope of the invention (Parulski, col. 6, lines 18-22).

Furthermore, in the same field of the endeavor for extracting an object from an image, **Smith** teaches that a first image including only a background (110) is captured (see Fig. 1), and then a second image including both the background (110) and an object (114) is captured (see Fig. 2 and col. 1, lines 14-20 and col. 13, lines 24-55).

Therefore, it would have been obvious to one of ordinary skill in the art to reconfigure the steps of capturing the first and second images in Parulski by capturing only a background as the first image and then capturing the background and the object as the second image in an obvious variant in view of the teaching of Smith so as to arrive at the same result without departing the scope of Parulski's invention (*it is also noted that since Parulski uses image tags for tagging each image and storing into the memory prior to post processing, thus, changing steps of capturing the first and second images would not change the scope of the invention*). Such variations in changing the steps of capturing to an alternative mode would allow the user/photographer more flexibility during the photographing session.

4. Claims 1-3, 6, 7 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parulski et al. and Smith et al. and in further view of Christian et al. (US 6,421,462).

Regarding claim 1, by incorporating the analysis of claim 11, the combined teaching of Parulski and Smith discloses all limitations of claim 1 except for that the first image (the background only image) is updated by using an image of a region other than the object region of said second image every a prescribed period is elapsed.

However, Christian teaches that an image (44 in Fig. 3) including an object and a background is used to update the background image (42) by using the background region of the image (44) without using the object region every time the image (44) is captured so as to allow environmental changes, such as subtle changes in lighting conditions, to be incorporated into the background, thereby improving extraction of the object (see Christian, Fig. 3; col. 9, lines 11-20 and col. 8, lines 62-67).

Therefore, it would have been obvious to one of ordinary skill in the art to further modify the apparatus and method in combined Parulski and Smith by updating the first image (the background only image) by using an image region (background region) other than the object region of the second image every time a prescribed period is elapsed so as to allow environmental changes, such as subtle changes in lighting conditions, to be incorporated into the background, thereby improving extraction of the object in view of the teaching of Christian above.

Regarding claim 2, the combined teaching of Parulski, Smith and Christian teaches a region extracting portion (Figs. 4A & 4B in Parulski) using said first and second images for outputting information of an object region of said second image; and a recording portion recording positional information data of said object region, and one

of data representing said second image and image data included in said object region onto a recording region (see Parulski, col. 4, lines 59-67).

Regarding claim 3, the combined teaching of Parulski, Smith and Christian also teaches a region extracting portion using said first and second images for outputting positional information of an object region of said second image; an image composing portion (i.e., computer 44 in Fig. 4A in Parulski) replacing an image in a region other than said object region of said second image with a prepared background image (a prepared background 28 shown in Fig. 1); and a recording portion (i.e., memory or hard drive of the computer 44) recording data of the image composed by said image composing portion onto a recording medium (see Parulski, col. 4, lines 59-67).

Regarding claim 6, this claim is also met by the analysis of claim 3.

Regarding claim 7, although Parulski, Smith and Christian are silent about a notifying portion notifying a timing at which pickup of said first image is finished and a timing at which pickup of said second image is started, an Official Notice is taken that it is well known in the art to provide a notifying portion in an imaging apparatus for indicating to the user/photographer by generating a sound or light similar to conventional self-photographing fashion.

Therefore, it would have been obvious to one of ordinary skill in the art to include a notifying portion for notifying a timing at which pickup of said first image is finished

and a timing at which pickup of said second image is started so as to properly alert the user/photographer to move an object into the camera's field of view for capturing the second image in a user friendly fashion.

Regarding claim 10, this claim is also met by the analysis of claim 1.

5. Claims 8 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parulski et al., Smith et al., Christian et al. and in further view of Aono et al. (US 5,267,333).

Regarding claims 8 & 9, although Parulski, Smith and Christian are silent as to the recording portion records the positional information data in a compressed form, this lack of teaching is compensated by Aono.

Aono teaches that image data of background and foregrounds or objects are recorded in compressed form so as to reduce quantity of data used in image synthesis without impairing the quality of image. See Aono, col. 3, lines 1-22.

Therefore, it would have been obvious to one of ordinary skill in the art to implement a compression unit in the apparatus to compress image data before recording onto the recording portion so that quantity of data used in image synthesis would be reduced to save memory space without impairing the quality of the image as taught by Aono.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


NHAN T. TRAN
Patent Examiner